

	<p align="center">William S. Middleton Memorial Veteran's Hospital</p> <p align="center">Elimination of Infectious Waste Stream and Improved Operating Efficiencies of the Medical Waste Incinerator</p>
Standard Industrial Classification (SIC)	General Medical and Surgical Hospital/8062
Type of Waste	Blood and body fluids collected during surgical procedures.
Strategy	Developed a pollution prevention plan to reduce medical waste and modified the process by modified a process to manage infectious waste streams.
Company Background	The VA Hospital in Madison, Wisconsin operates 127 acute care beds in 13 buildings. The VA hospital provides tertiary medical, surgical, neurological, and psychiatric care as well as a full range of outpatient services to a population of approximately 235,000 veterans in the area. The extensive research program includes research in the areas of cancer, diabetes, geriatrics, hypertension, infectious disease diagnosis, orthopedic surgery, pulmonary diseases, quality of life/care assessment, and swallowing disorders. The hospital's 1996 research budget was over \$5 million.
Original Process	All medical wastes generated at the hospital had previously been disposed of by incineration with no deliberate attempts to segregate non-infectious waste from the waste stream. Some waste streams are unavoidable such as bulk blood and body fluids generated in the operating suite. These were collected in canisters which were then transported from the 8th floor to another building on the premises housing the incinerator. A number of employees were engaged to handle the canisters of infectious from point of generation to final disposal.
Motivation	The amount of waste being processed at the VA hospital medical waste incinerator was increasing every year. Incineration of medical waste is expensive and burning high moisture content items such as bulk blood and body fluids causes more wear and tear on the incinerator, increasing maintenance costs.
Pollution Prevention Process	The VA hospital, as a result other the waste reduction audit, focused on the bulk blood and body fluids collected, as an area that could realize cost savings through source reduction. Researching alternatives to manage these wastes led the hospital to the sealed fluid siphoning device (SFSD). During surgical procedures bulk blood and body fluids are collected in canisters. The filled canisters are emptied into the SFSD. The SFSD evacuates the liquid wastes from the canister and drains it into the sewer system where the mixed sewage is treated at a publicly owned treatment works. This is an environmentally preferred option of treatment since the biological processes will render infectious characteristics of wastewater harmless. The empty canisters are processed in the incinerator.
Stage of Development	The process has been in operation since December of 1996.
Level of	The SFSD may be purchased through Deknatel Incorporated. This

Commercialization	technology is available to other businesses now.																																																					
Obstacles	The VA hospital senior management had to be convinced of the initial outlay of capital costs to install the equipment. Additional education was needed to inform housekeeping and nursing staff about the benefits of using the SFSD.																																																					
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	pay for itself in a little over 4 years.
Benefits	Canisters of liquid regulated medical waste can be processed where they are generated, eliminating risks of exposures to staff and possible spills during transfers. Additionally, it was discovered that incinerator operation could be rescheduled which resulted in further savings to treat infectious waste. Before these scheduling changes it costs \$.41/lb and now it costs \$.25/lb.
Technology Transfer	Any hospital or out-patient clinic setting could use this technology to manage bulk blood and body fluid wastes. Further information on the equipment is available from Deknatel Incorporated
Other Environmental Programs	Prior to 1992, the hospital had no recycling program. All waste was sent to the landfill. A recycling program was initiated that separates paper, glass styrofoam aluminum steel cardboard, magazines, newspaper, plastic, tires, oil and wood pallets. The program now annually generates \$7,542.00 in revenue, and resulted in a cost avoidance of over \$12,000 a year in tipping fees if these materials were landfilled. The hospital refurbished 52 old isolation carts and modified them for use as recycling stations, which further encourages source separation, as well as keeping the discarded equipment out of the landfill.
Company Address	William S. Middleton Memorial Veterans Hospital 2500 Overlook Terrace Madison, Wisconsin 53705
Contact Person	Keith Bednar, Chief, Environmental and Material Management Service Telephone (608) 262-7045
Pollution Prevention Resources	<p>Free, On-site Technical Assistance University of Wisconsin Extension Solid and Hazardous Waste Education Center Milwaukee area: 414/475-2845 Remainder of state: 608/262-0385</p> <p>Pollution Prevention Information Clearinghouse Wisconsin Department of Natural Resources Bureau of Cooperative Environmental Assistance 608/267-9700 or e-mail: cea@dnr.state.wi.us</p>



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